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Quality Engineering Test Report

SERIES: S-100F 100W AC-DC SINGLE OUTPUT SWITCHING POWER SUPPLY

SAMPLE: A.S-100F-5 5V / 20A D.S-100F-15 15V / 6.7A
B.S-100F-7.5 7.5V / 13.5A E.S-100F-24 24V / 4.5A
C.S-100F-12 12V / 8.5A F.S-100F-48 48V / 2.2A

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:176~ 264VAC O/P:FULL LOAD	C:140VAC~ 267VAC	P
2	LINE REGULATION	I/P:176~ 264VAC SPEC: O/P:FULL LOAD A: ±0.5% B: ±0.5% C: ±0.5% D: ±0.5% E: ±0.5% F: ±0.5% ±0.5%	A: 0% ~ 0% B: 0% ~ 0% C: 0% ~ 0% D: 0% ~ 0% E: -0.02% ~ 0% F: 0% ~ 0%	P
3	LOAD REGULATION	I/P:230VAC SPEC: O/P:MIN. TO FULL LOAD A: ±1% B: ±0.5% C: ±0.5% D: ±0.5% E: ±0.5% F: ±0.5% ±0.5%	A: -0.24% ~ +0.12% B: -0.16% ~ +0.08% C: -0.05% ~ +0.05% D: -0.04% ~ +0.04% E: -0.02% ~ 0% F: -0.01% ~ 0%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:180~ 264VAC SPEC: O/P:0% TO FULL LOAD A: ±2% B: ±1% C: ±1% D: ±1% E: ±1% F: ±1% ±1%	A: -0.24% ~ 0% B: -0.08% ~ +0.08% C: +0.51% ~ +0.63% D: -0.05% ~ +0.04% E: -0.05% ~ 0% F: -0.07% ~ +0.04%	P
5	RIPPLE & NOISE	I/P:230VAC SPEC: O/P:FULL LOAD A: 100mV B: 125mV C: 125mV D: 125mV E: 150mV F: 150mV	A: 82mV B: 42mV C: 53mV D: 80mV E: 37mV F: 29mV	P
6	AC INPUT CURRENT	I/P:230VAC SPEC:1.2A O/P:FULL LOAD	C:1.07A	P
7	MAX. INRUSH CURREN	I/P:230VAC SPEC:60A O/P: FULL LOAD	C:36.5A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC SPEC: A:±10% O/P:MIN. LOAD B:±10% C:±10% D:±10% E:±10% F:±10%	A: 4.44V~ 5.80V B: 6.38V~ 9.02V C: 10.11V~ 13.84V D: 12.50V~ 17.42V E: 19.93V~ 27.34V F: 40.40V~ 54.22V	P
9	SET UP TIME	I/P:230VAC SPEC:1000mS O/P:FULL LOAD	C: 720mS	P
10	HOLD UP TIME	I/P:230VAC SPEC:15mS O/P:FULL LOAD	C: 35mS	P
11	EFFICIENCY	I/P:230VAC SPEC: A:76% O/P:FULL LOAD B:78% C:80% D:81% E:83%	A:76.73% B:79.46% C:80.7% D:82.22% E:83.62%	P

			F:84%	F:85.28%	
12	OVER LOAD PROTECTION	I/P:230VAC O/P:TESTING	SPEC: 105%~ 150%	A:120% B:125% C:123.5% D:120% E:122% F:123%	P

NEXT

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
13	OVER VOLTAGE PROTECTION	I/P:230VAC SPEC: 115%~135% O/P:TESTING	A:126% B:127% C:120% D:129% E:132% F:130%	P
14	GROUND LEAKAGE CURRENT	I/P:240VAC SPEC: L-FG--<1mA N-FG--<1mA	C: L-FG:0.66mA N-FG:0.68mA	P
15	GRUNDING CONTINUITY	SPEC: FG--CHASSIS<0.1 Ohms/2min	C: 3m Ohms	P
16	INSULATION RESISTANCE	SPEC: I/P-O/P: 500VDC/100MOhms MIN. I/P-FG: 500VDC/100MOhms MIN. O/P-FG: 500VDC/100MOhms MIN.	C: O/P-FG >100MOhms I/P-O/P >100MOhms I/P-FG >100MOhms	P
17	DIELECTRIC / WITHSTAND VOLTAGE	SPEC: I/P- O/P: 3KVDC/ 1 min. (10mA CUT-OFF) I/P - FG: 1.5KVDC/ 1 min. (10mA CUT-OFF) O/P -FG: 0.5KVDC/ 1 min. (10mA CUT-OFF)	C: I/P-O/P :5.41mA I/P-FG :4.52mA O/P-FG :3.82mA	P
18	EMS TEST	EFT TEST: EN50082-1 IEC1000-4-4	E: CRITERIA A OK	P
		SURGE TEST: EN50082-1 IEC1000-4-5	E: CRITERIA A OK	P
19	ESD TEST	ESD TEST: EN50082-1 IEC1000-4-2	C: CRITERIA A OK	P
20	HARMONICS	I/P: 230VAC O/P: FULL LOAD IEC555-2 CLASS A	C: CLASS A OK	P
21	BURN-IN TEST	I/P: 230VAC O/P: FULL LOAD TA:26°C BURN-IN DURATION : 3.5 hrs	C:NON BREAK	P
22	ENVIRONMENT TEST	HIGH AMBIENT TEMPERATURE FULL LOAD TEST I/P:230VAC O/P:FULL LOAD AMBIENT TEMPERATURE:39.2°C	C: AFTER 4.5 hrs NON BREAK	P
23	TEMPERATURE RISE TEST Trise OF PARTS	C: I/P :230VAC AFTER 3.5 hr BURN-IN O/P :FULL LOAD TA:26°C		P

POSITION	P/N	TEMP	Trise
BD1	BRIDGE DIODE	71.4°C	45.4°C
Q1	MAIN TRANSISTOR	74.6°C	48.6°C
T1	MAIN TRANSFORMER WIRE	79.9°C	53.9°C
D8	O/P DIODE	91.7°C	65.7°C
C26	O/P FILTER CAPACITOR	64.2°C	38.2°C
L3	O/P CHOCK	86.8°C	60.8°C
T1	MAIN TRANSFORMER COIL	90.5°C	64.5°C
SCR2	SCR	58.7°C	32.7°C
D3	FLY DIODE	76.5°C	50.5°C

24	LIFE CYCLE	C: SUPPOSE C26 IS THE MOST CRITICAL COMPONENT I/P:230VAC O/P:FULL LOAD Ta:25°CTc26:63.2°C Life: 110808 hrs I/P:230VAC O/P:FULL LOAD Ta:45°C Tc26:78.2°C Life: 39176 hrs	P
25	CRITICAL COMPONENT RECORD (FOR QC INSPECTION REFERENCE ONLY)	C: FUSE : 3AL/250V BRIDGE DIODE : D3SB60 LINE FILTER : TF096C1 EE-25 TRANSFOMER : TF121-R2 EI-40 POWER SWITCHER : 2SK727 TO-3P OUTPUT DIODE : BYV32200 OUTPUT CAPACITOR : ELNA 1000uF/25V 105°C RJH INPUT CAPACITOR : NITSUKO 220uF/200V 85°C PN-J P.C.B :S-100FN-R4 CEM-3 2 OZ SS	

DATE	SAMPLE	NOTE	TEST	APPROVAL
19990520	S-100F	PASS	H.C.LIOU	Max Lin
19990507	S-100F-24	PASS	H.C.LIOU	Max Lin
19990707	9907A05A PRODUCT S-100F-12	PASS	H.C.LIOU	Max Lin